U. S. Department of Labor

Mine Safety and Health Administration
110 Gott Road
Princeton, West Virginia 24740

File · Sub.dist. files #9 Uni

0238

February 4, 1981

MEMORANDUM FOR: HERSCHEL H. POTTER
Chief, Division of Safety

FROM: CLOYD BLANKENSHIP
Mining Engineer CB

SUBJECT: Report on Investigation of Nonfatal Coal Mine Bump(s), Beatrice Mine, Beatrice Pocahontas Company, Keen Mountain, Buchanan County, Virginia

A coal mine bump(s) of considerable magnitude occurred in the skip south section of the subject mine on January 21, 1981. The incident(s) occurred sometime between 2:40 p.m. and 4:10 p.m., during the shift change. Jack F. McManus, Subdistrict Manager, notified the writer of the occurrence at 6:35 p.m., January 21, 1981. There were no injuries or property damage. The writer participated in the investigation that was started the following day.

Those participating in the investigation conducted underground were:

Company Officials

Allen Williamson	Superintendent
Hearld Shortridge	General Mine Foreman
Howard Rose	Safety Inspector
Cecil Keene	Section Foreman

United Mine Workers of America

Walter Browning	Safety Committeeman

Virginia Division of Mines and Quarries

Phillip Willis	District Inspector
Walter Branham	District Inspector

Mine Safety and Health Administration

Glenn Harman	Coal Mine Inspector
Cloyd Blankenship	Mining Engineer

The investigation revealed five chain pillars and three pillar remnants had erupted to some degree as a consequence of the bump(s), and one cinderblock stopping was torn out due to the expansion of the coal rib.

The attached mine print shows the specific area involved, the focus of the bump(s) locations where coal was expelled violently from pillars, area where the floor was affected, and the extent of extraction.

In pillars A, B, C, and D the force generated by the abrupt release of energy resulted in coal being expelled violently and in sufficient quantities to spread coal to a depth of approximately 2 feet across the openings (dark areas). As a result of the force, the working face (pillar "A") was expanded outward for a distance of 10 feet. The force generated in the pillar remnants E, F, and G was only minor reactions causing small amount of coal to be expelled from the ribs. These chain pillars (90x80 feet) had been split during the mining of the adjacent area to reduce the size of the pillars to avoid excessive pressure build-up in the pillar remnant for second mining.

It will be noted, that several pillar remnants and one pillar (70x100 feet) in size were abandoned in the pillared out area. The abandonment of these remnants was due to very hazardous roof conditions, and the pillar was abandoned because of its vulnerability to a violent coal outburst. Mining was being done in the maximum pressure zone (in the vertex of two pillared out areas) which make the pillars more vulnerable to coal mine bumps.

It could not be ascertained when the pillars erupted in relation to one another; however, it is the opinion of the writer that the bumps were a result of a chain reaction.

The geologic conditions of the mine consist of a stratum overlying the coalbed to be a thickness of 1,800 to 1,950 feet, and a very strong mine floor and roof.

The writer had visited the area previously and on the day the incident occurred. During the visits preceding the incident, pillar recovery was progressing satisfactorily and according to the adopted plan. On the day the incident occurred, the physical conditions of the area was surveyed and there was no physical change observed. However, during the mining of the cut in pillar "A" a couple of tremors occurred with great intensity.

It was concluded by the writer, the contributing factors that motivated the bump(s were:

1. The thickness of the overlying strata.

2. The strength of the mine floor and roof.

3. The abandonment of the pillar remnants and/or chain pillars in the pillared out area.

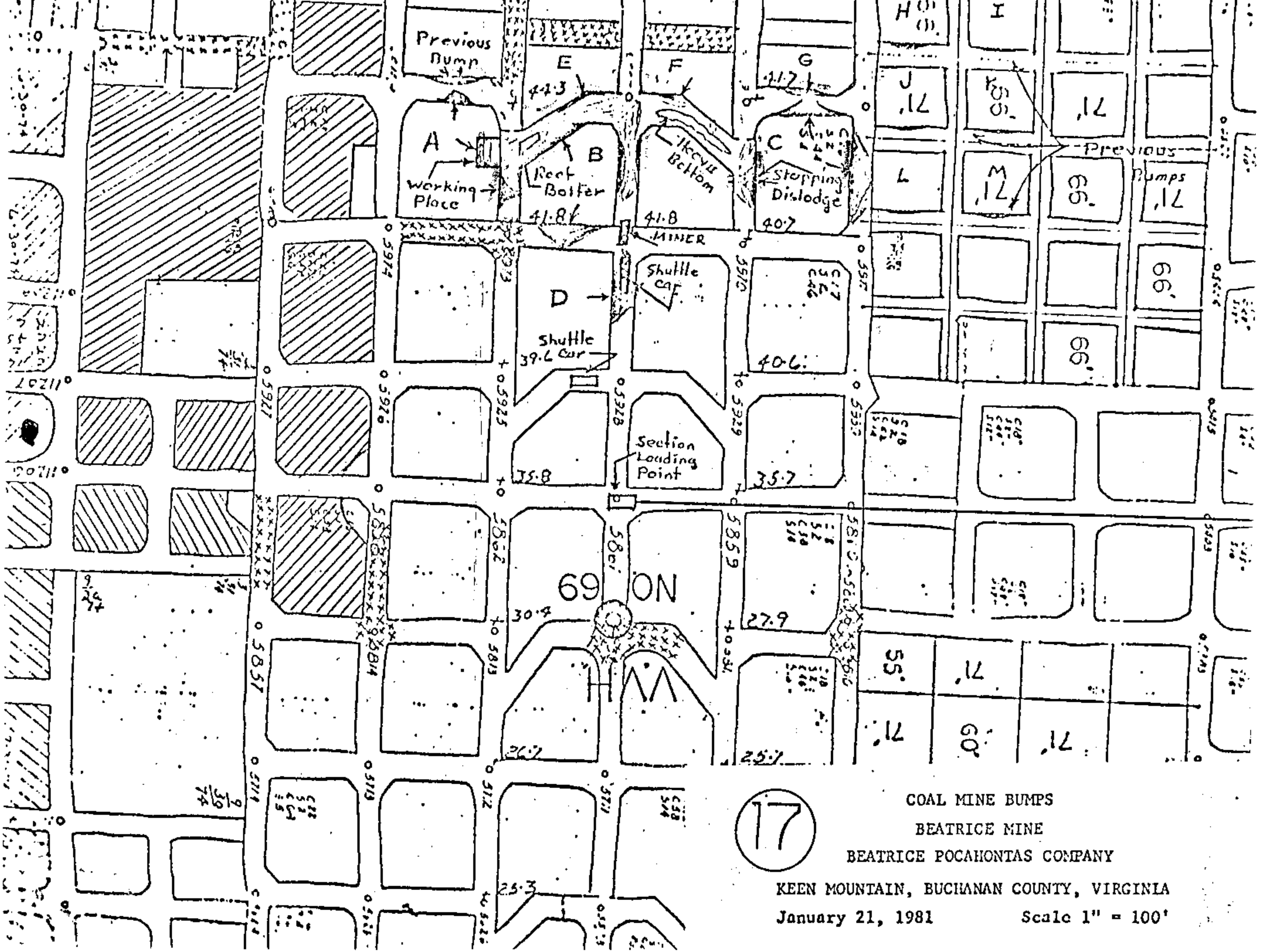
4. The irregularity in the size of the chain pillars.

5. The chain pillars were located in the maximum pressure zone.

At the time of this writing, the section has been inactive due to the operating officials are determining what revisions should be made in the plans before resuming mining in this area.

Attachment

cc: Jack F. McManus



17

COAL MINE BUMPS

BEATRICE MINE

BEATRICE POCAHONTAS COMPANY

KEEN MOUNTAIN, BUCHANAN COUNTY, VIRGINIA

January 21, 1981 Scale 1" = 100'